

Notice of Allowability

Application No.

09/940,591

Examiner

Kevin L McHenry

Applicant(s)

SAKAI ET AL.

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview of 18 February 2004.
2. ☒ The allowed claim(s) is/are 2-13.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 11/5/01
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 02/18/04
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Melanie Mealy on 17 February 2004.

The application has been amended as follows:

Cancel claim 1

In claim 2, line 2, replace "arranged between" with --in communication with fuel in--

In claim 2, lines 2-4, delete "and an injector of an engine, or arranged in a tank of a gas station fuel tank or a tanker truck"

In claim 4, line 2, delete "salt filtering off"

In claim 5, line 2, replace "arranged between" with --in communication with fuel in--

In claim 5, lines 2-4, delete "and an injector of an engine or arranged in a gas station fuel tank or a tanker truck"

In claim 7, line 2, delete "salt filtering off"

Add the following new claims:

8. The apparatus according to claim 2, wherein said apparatus is between the fuel tank and an injector of an engine.

9. The apparatus according to claim 2, wherein the fuel tank is a gas station fuel tank.

10. The apparatus according to claim 2, wherein the fuel tank is in a tanker truck.

11. The apparatus according to claim 5, wherein said apparatus is between the fuel tank and an injector of an engine.

12. The apparatus according to claim 5, wherein the fuel tank is a gas station fuel tank.

13. The apparatus according to claim 5, wherein the fuel tank is in a tanker truck.

Allowable Subject Matter

2. Claims 2-13 are allowed.

3. The following is an examiner's statement of reasons for allowance: the instant application is considered to be a nonobvious improvement over the invention of Monticello (U.S.P. 5,496,729) or Kilbane, II (U.S.P. 5,104,801). The improvements comprise the combination of a sulfur-containing compound removing apparatus in communication with a fuel in a fuel tank, wherein the apparatus includes a sulfur adsorbent, a sulfur oxidizing agent or oxidation catalyst that is immobilized in the adsorbent or coexists with the sulfur containing compound, an adsorbent that coexists

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with the sulfur adsorbent and catalyst or is arranged at a lower stream for adsorbing sulfur-containing oxide, and a sulfur-containing oxide salt removing means.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

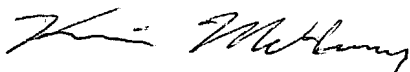
4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Monticello (U.S.P. 5,496,729), Kilbane, II (U.S.P. 5,104,801), Lesieur et al. (U.S.P. 6,129,835), Lesieur et al. (U.S.P. 6,454,935), Gleim et al. (U.S.P. 2,988,500), Kirshenbaum (U.S.P. 2,975,103), Gleim (U.S.P. 3,108,081), Dodwell (U.S.P. 6,429,170), Zinnen et al. (U.S.P. 5,843,300), Holland et al. (U.S.P. 4,343,693), Johnson et al. (U.S.P. 6,071,738), Valentine (U.S.P. 5,874,294), Olson (U.S.P. 6,124,130), Chang et al. (U.S.P. 6,204,046), and Monot et al. (U.S.P. 6,337,204) are cited of interest for illustrating the state of the art in desulphurization processes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L McHenry whose telephone number is (571) 272-1181. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin McHenry

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Kiley Stoner 2/18/04